

REMARKS

The subject invention relates to an improved system architecture for a therapeutic device for treating tissue with radiation. The system architecture allows two completely different light treatment modalities to be driven from a common power source and also provides enhanced safety.

In a preferred embodiment, one of the light sources is a laser 30 which is located within the console of the system. Light emitted from the laser is carried by an optical fiber 132 to a passive handpiece 62. In contrast, the second handpiece 60 contains a second, separate light source. As described in the specification, the second light source could be a compact laser, a flashlamp or filament lamp. A cable 130 connects the second handpiece to the console and carries power and control signals to the flashlamp. The light sources are selectively driven by a power supply 40. Suitable types of power supplies are illustrated in Figures 11 and 16.

One aspect of the subject invention includes providing a handpiece management unit 220 for supporting both handpieces. The management unit includes sensors 50 for monitoring whether the handpieces are mounted in place. In a preferred embodiment, the system's safety controls are arranged so that the user can only activate the handpiece that has been removed from the management unit and moreover, will not activate either handpiece if both units have been removed.

In the Office Action the Examiner allowed claims 1 to 3 and 10. In addition, the Examiner objected to claim 15. Applicants have amended claim 11 with the subject matter of claim 15 so that it is believed claims 11 to 14 are now in condition for allowance.

In the Office Action, the Examiner rejected claims 4 and 16 to 20 as being obvious in view of Zawada (6,592,611). Applicants' response will focus on independent claims 4 and 16 each of which includes the concept of a placing one of the light sources within a handpiece (active handpiece). A second, laser light source is located within the console. Light emitted by the laser light source is supplied to a second, passive handpiece via an optical fiber. This particular architecture supports the use of two completely different light sources. This approach provides flexibility and allows the user to treat different tissue conditions with different types of treatment modalities.

Zawada discloses a system for treating tissue with optical radiation. Light is generated within a diode laser module 12. Zawada teaches that the module 12 should be configured to

generate two or more different wavelengths of light. All of these wavelengths are combined into at least two identical output channels. As noted beginning at column 4, line 63, each channel is supplied with identical output wavelengths. Each identical channel is fed into a separate fiber optic delivery system, each of which terminates in a passive probe (18 and 20). As seen in Figure 2, Zawada teaches that both of the probes should be used to simultaneously treat the tissue with the same radiation. Two probes are used to increase the power delivered to the target tissue located below the skin without burning the skin surface.

In the Office Action, the Examiner suggests it would obvious to modify Zawada to include a flashlamp as an alternate treatment source. Applicants respectfully traverse this rejection for the reasons set forth below.

The teachings of Zawada fail to suggest applicants' invention for many reasons. First, Zawada teaches that a common light source is to be used, not two different light sources as required in applicants' claims. Second, Zawada's common light source delivers light to a pair of passive handpieces. In applicants' invention as set forth in claims 4 and 16, one of the two light sources is a laser supplying light to a passive light source. The second handpiece is active in that it includes its own light source. Still further, Zawada teaches that the tissue should be simultaneously treated with the exact same composite radiation from the two separate but identical handpieces. This approach is exactly opposite to applicants' invention wherein the user is offered two entirely different types of handpieces and therefore two different treatment modalities. In the preferred embodiment, applicant's system is arranged to prevent both of these handpieces from being used simultaneously.

The Examiner's proposed modification of Zawada would not diminish the many differences between Zawada and applicants' claimed invention. First, assuming for the sake of argument that it would be obvious to use a flashlamp in Zawada's system, the flashlamp would have to be used in place of, or in conjunction with, the radiation source 12. The output of the flashlamp would then be divided and sent to the Zawada's identical handpieces. Clearly, this combination, even if obvious, would not meet applicants' claims which require a laser source located in the console connected to a passive handpiece and a separate, different, active handpiece containing its own light source.

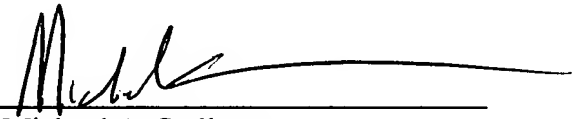
In addition, one skilled in the art would not be motivated to replace one of the two passive handpieces of Zawada with a flashlamp since Zawada teaches that both handpieces must be identical and emit the same output.

For the reasons set forth above, it is respectfully submitted that original independent claims 4 and 16 define patentable subject matter and allowance thereof, along with the claims depending therefrom is respectfully requested.

Respectfully submitted,

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